Subject: Re: Arrays in structures; workarounds?
Posted by Craig Markwardt on Thu, 04 May 2000 07:00:00 GMT
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"J.D. Smith" <jdsmith@astro.cornell.edu> writes:

> The problem here is reliance on *trailing* shallow dimensions. The
> IDL manual quotes us:
>
> "As with other subscript operations, trailing degenerate dimensions
> (those with a size of 1) are eliminated."
>
> While I can't agree with IDL's mixed notion of a variable's dimensionality
> between help and direct structure member access, I think IDL has always been
> clear about this point.

Yes, this aspect of IDL's behavior is documented. I've complained about this before because the policy has the habit of biting you at very awkward moments. As a programmer, you rarely expect the shapes of your arrays to change without your asking!

But my point here was that there is absolutely *no* legitimate way to find the true dimensions of a structure tag. Hopefully you will see why I want this soon enough, when I have time to finish my little project. It's pretty cool.

> The one place you are justified in complaining is the truncation of a single
> element vector to a scalar: this is a bug (or at least an inconsistency), and
> affects structure field access only:

Bingo. IDL's behavior of trimming degnerate dimensions from variables is *usually* okay because it still leaves you with an array at the end. However, when single-element tags in structures are extracted they are (a) converted to scalars, and (b) there is no way to know that this happened. Try passing this as X or Y to a routine like PLOT and you get a crashola. Documented or not, this is ridiculous behavior.

Multi-element arrays have a similar problem, but I posted a solution for that. I was hoping to close this final gap...

Oh well,
Craig

P.S. I should be writing a proposal now. Yikes. Back to work..
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